



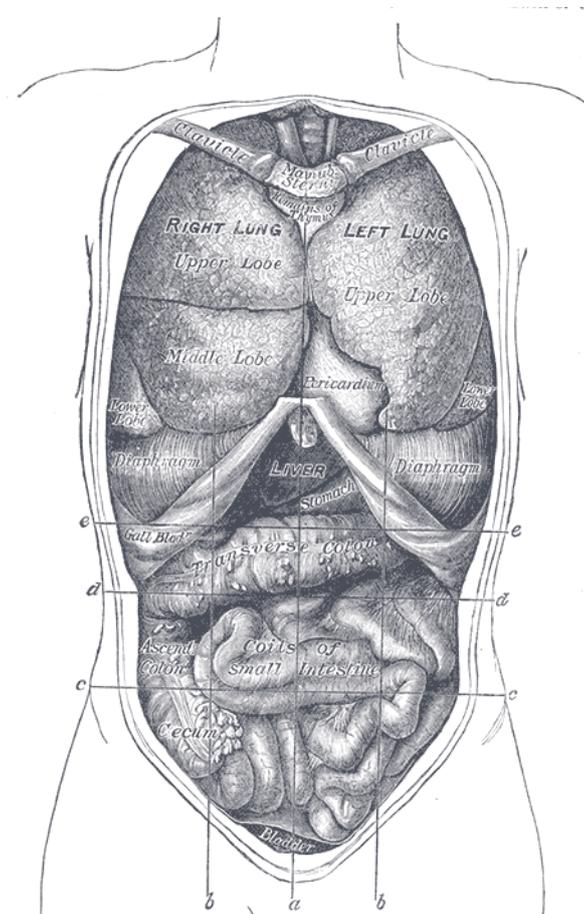
UNSW
SYDNEY

Australia's
Global
University

Faculty of Medicine
School of Medical Sciences

ANAT3121

VISCERAL ANATOMY



COURSE OUTLINE

Term 1, 2020

CRICOS Provider Code 00098G

Table of Contents

Table of Contents	2
Staff Contact Details	3
Course Details	3
Learning Outcomes	4
Course Structure and attendance:	4
Teaching Rationale and Strategies	4
Seminars	4
Laboratory/Practical classes	5
Tutorials	5
Moodle	5
Attendance	5
Assessment	6
Student Resources	8
Textbooks	8
Recommended Atlas	8
Reference Books	8
Library Resources	8
Anatomy lab student risk assessment	9
Student Risk Assessment	9
Ethical Behaviour and human remains	10
Administrative help	10

Please read this manual/outline in conjunction with the following pages on the

[School of Medical Sciences website:](#)

- [Advice for Students](#)
- [Learning Resources](#)

(or see "STUDENTS" tab at medicalsciences.med.unsw.edu.au)

Staff Contact Details

Course Conveners

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Appointments with any of the above academics should be arranged **via email**.

Please email from your **official UNSW student account**, include your **student number, course code** and state the **subject** clearly. **Except for questions that have private/personal content, all questions preferably should be posted in the Moodle Forum.**

Course Details

ANAT3121 Visceral Anatomy is a 6 UOC Level III course for Science, Medical Science, and other students. The course builds on the content covered in the introductory anatomy courses (ANAT1521, ANAT2111 and ANAT2511) and complements the level III anatomy courses (ANAT3131, ANAT3141 and ANAT3411).

This course aims to provide you with a sound understanding of the functional and clinical anatomy of the viscera (organs) in the human body from both a regional and systemic anatomical perspective. The focus is on the organ systems in the thorax, abdomen and pelvis (respiratory, cardiovascular, gastrointestinal, urinary, reproductive, lymphatic and autonomic nervous systems) and their functional integration with each other. Through the course activities, you will construct a 3-dimensional understanding of the human body and be able to apply this to cross-sectional, imaging and clinical anatomy.

Students build their knowledge in these systems via studying prosected wet and plastinated cadaveric specimens, models and bones as well by using the latest available technology. The course incorporates topographical, radiological and cross-sectional anatomy of the respective regions through the study of medical imaging and cadaveric sections. Relevant clinical and functional anatomy is discussed as applicable in seminars and practical sessions, and are the focus of special tutorial sessions designed to allow students to apply the course content via clinical scenarios.

The course was well-received in 2019. Student feedback and suggestions are always valued and the course is modified based on these. Also, the course has been modified to be effective in the 10-week trimester format. The following modifications have been made to the course for 2020:

The course delivery has been restructured to the term format and re-arranged based on previous feedback so that it better fits into this framework.

Learning Outcomes

ANAT3121 will develop the attributes identified by the Faculty of Science as important for a science graduate to attain. These include the skills, qualities, understanding and attitudes that promote lifelong learning that students should acquire during their university experience.

At the completion of the course the student should be able to:

1. demonstrate a sound knowledge of the anatomy of the organ systems of the body, including the musculoskeletal framework, the autonomic nervous system and the lymphatic system;
2. apply knowledge of the anatomy of the organ systems to construct a 3-dimensional perspective of the human body and apply this to interpreting cross-sectional anatomy and radiological images
3. relate clinical problems, and potential treatments to the anatomy that underpins those conditions
4. research and critically evaluate literature and media, and reflect on their content through self-directed learning, teamwork and health advocacy.

Course Structure and attendance:

The weekly format is as follows:

1. Tutorials: Monday between 3-5pm; Venue: Anatomy dissection lab/TETB, G16
2. Interactive seminar: Wednesdays 11am-1pm; Venue: Matthews Th A.
3. Laboratory Session : Thursdays 9am-12pm ; Venue: Lab 07, 1st floor, Biosciences Building

Please note that changes to this format are detailed in the timetable.

Any further changes to the timetable will be communicated via the course moodle.

While it is intended that the seminars are recorded, please note that this cannot be guaranteed as the technology is controlled centrally. **It is strongly recommended that students attend all seminars as these form the basis for the practical content. Attendance will be required at all laboratory and tutorial sessions. The laboratory sessions as well as some tutorials have assessable components.**

Teaching Rationale and Strategies

Seminars

The seminars are designed to provide preliminary information and an overview of the topic and are a prerequisite for learning in the labs. Although we make every attempt to ensure that the seminars are recorded and lecture notes published on Moodle, it is advisable for the students to attend all seminars to achieve better learning outcomes.

The timetable has been planned such that the seminars link to practical classes that follow, and the expectation is that students come prepared for the laboratory classes.

In some cases there is supplementary online material to assist in preparation for tutorials or labs, and/or post-class work to help consolidate content covered.

Laboratory/Practical classes

The laboratory classes complement the lectures, and involve active learning in a small group situation. There is much research to indicate that this is the best method for the learning of anatomy and these sessions will give you a window into the wonder of the human body. You will be required to study dry bones, models, wet and plastinated dissected specimens as well as cross-sectional and radiological anatomy. In the laboratory classes, every student is required to be involved in inquiry and take an active participation in the learning process.

It is strongly advised that students come well prepared in order to make the best use of their time in the laboratory. Each lab session links to content covered in the seminars.

In the lab each student is assigned a laboratory group with a tutor. It is compulsory for the students to stay in their allocated laboratory group for the whole session. If you have any concerns about your group/tutor, you may approach your course convener and discuss the matter. You cannot change your laboratory group on your own.

Surface palpatory anatomy and cross-sectional anatomy is included in each practical. Surface and cross-sectional anatomy as well as radiological imaging is examinable via specimens and images during practical exams and in the theory exams.

Tutorials

These are aimed to be interactive sessions focussing on clinical anatomy and solving of clinical problems and include medical imaging and cross-sectional anatomy. Some tutorials will focus on clarifying difficult anatomical concepts. Two tutorial hours will be used for continuous assessment and one week will be dedicated to presentation and peer review of student assignments.

Moodle

This course uses Moodle as its learning platform. Here you will find the lecture notes, online videos and activities, assessment, announcements and discussions. More information regarding instructions and requirements will appear on Moodle under announcements and a pop-up message will appear when you log on.

Students are encouraged to use the discussion forum in the Moodle for questions related to this course. These questions can be answered with corrections or suggestions by your peers and/or the course authority.

Students are expected to check Moodle regularly for announcements, tests and/or additional resources. It remains your responsibility to make yourself aware of the activity.

Attendance

Your attendance at seminars, laboratories and tutorials is IMPORTANT, including in Week 1, in which key information such as the course structure and assessments, laboratory safety, ethical considerations and procedures will be discussed. Attendance in all activities is highly recommended and our expectation is that **all** practical sessions will be attended.

Please note that should you be unable to attend your practical class for any reason, you will not be able to do "make-up" labs.

Assessment

The assessment for this course will have theory and practical components and is shown in the table below:

1. Laboratory quizzzes	10%
2. Spot Tests	40%
3. Assignment	10%
4. Final Theory	40%

Content taught in seminars, practicals, tutorials or via Moodle activities can be tested in any of the assessments.

Lab Quiz:

Weekly online quizzes are based on the week's seminar/ tutorial content to encourage students to be adequately prepared for each lab. These are completed at the beginning of each lab session and usually comprises 5 MCQs. The five best quiz marks contribute 10% to the final mark.

Feedback process: Students will receive immediate feedback

Spot Tests:

Laboratory practical content will be assessed through 2 spot tests, one at the mid-term and one at the end of the term. Spot tests assess the students' ability to identify and correctly name structures in human anatomical specimens, models, and medical imaging and their ability to correlate this to the gross and clinical anatomy.

Feedback process: Performance outcomes as well as generalised feedback regarding spot questions; feedback for specific cases will be provided.

Assignment:

Students will work in teams to research a given topic related clinical application of anatomical concepts. The format of the final submission will be detailed on the course Moodle page.

Feedback process: Students will receive feedback from peers and academics at the time of presentation.

Final Theory:

The theory written paper is scheduled during the exam period and will consist of MCQs and short answer questions that is completed over 2 hours.

Feedback process: Performance outcome will serve as feedback

The pass mark for this course is **50%**.

<p>Please note: Final exam period for Term 1, 2020 is Sat 2 May to Friday 15 May 2020. The supplementary exam period for Term 1, 2020 is Mon 25 May to Fri 29 May 2020. It is advised that students ensure that they are available during these times.</p>

Access to previous exam papers

Past exam papers are **not** available to students. **Sample** questions are **provided** during lectures, revision activities and are published via Moodle.

Failure to complete an assessment

In case if you miss any part of your assessment due to misadventure or illness, an application for Special Consideration should be lodged online in myUNSW before the assessment is due.

Failure to sit a test or exam without lodgement of an application for **Special Consideration** will lead to automatic failure of the test. An absence from a test or exam must be supported by a medical certificate or other document that clearly indicates you were unable to be present. That certificate should be dated the same day as the examination. See <https://student.unsw.edu.au/special-consideration>

Should you require adjustments for a disability, please see the Equitable Learning Services:
<https://student.unsw.edu.au/els>

Student Resources

The student in this course is expected to have a textbook and an atlas of their personal choice/preference. You may bring your books with you to the lab classes, for quick reference as long as you are responsible for their safety.

Textbooks

- Moore, KL, Dalley AF, Agur AM. *Clinically Oriented Anatomy*, 8th edition, Lippincott Williams & Wilkins (earlier editions are acceptable as well) **or**
- Drake, RL, Vogl W and Mitchell AWM, *Gray's Anatomy for Students*, 4th edition, Elsevier Churchill Livingstone (available online via the library)

Recommended Atlas

- Rohen, JW, Yokochi, C. & Lutjen-Drecoll. *Color Atlas of Anatomy*, Lippincott Williams & Wilkins, 8th edition **or**
- Netter, FH. *Atlas of Human Anatomy*, Novartis, 6th edition **or**
- Agur, AMR & Lee, MJ. *Grant's Atlas of Anatomy*, Lippincott Williams & Wilkins, 13th edition; **or**
- Abrahams PH, Boon JM and Spratt JD. *McMinn's Clinical Atlas of Human Anatomy*, Mosby Elsevier, 7th edition.

Reference Books

- Dean D and Herbener TE, "Cross Sectional Human Anatomy: Including images from the National Library of Medicine's Visible Human Project", 2007, Lippincott Williams & Wilkins.
- Hull, Lippincott Williams and Wilkins, *Colouring atlas of the human body*.
- Marieb, EN & Hoehn K, *Human Anatomy and Physiology + CD* 9th edition, Pearson Benjamin Cummings.
- Martini FH, *Fundamentals of Anatomy and Physiology*, 10th edition, Pearson Benjamin Cummings.
- Robert D. Acland, *Acland's Cross-Sectional Navigator*, Lippincott Williams And Wilkins.

Library Resources

See [Learning Resources](#) on the SoMS website Student pages.

- Library Subject Guide for Anatomy
SUBJECTGUIDES.LIBRARY.UNSW.EDU.AU/MEDICINE/ANATOMY
- Primal Pictures: 3D interactive anatomy database
- Anatomedia
- Acland's Video Atlas
- Gray's Anatomy for Students

The Library holds a variety of 3D anatomical models for students: They are housed in My Course Reserve, level 2.

Anatomy lab student risk assessment

Medicine Teaching Laborator	 UNSW SYDNEY	Gross Anatomy Practical Classes for Medical and Science Students
Student Risk Assessment		Location: D26 Level 1 LAB08A/07 DOC:PHSL-SRA-S&H-01rev1.1

Hazards	Risks	Controls
Physical Cold temperature (16°C) Sharp bone/plastic Biological Fungi, bacteria (tetanus), hepatitis B and C Chemical Formaldehyde Methylated spirits 2-phenoxyethanol	Cold Penetrating wound of foot Infection Corrosive/Flammable Flammable Irritant	<ul style="list-style-type: none"> Wear laboratory coat over appropriate warm clothing Wear enclosed shoes with full coverage of the dorsum of the foot Wear protective eyewear Have appropriate immunisation Do not eat, drink or smoke in the Anatomy Lab Do not place anything (e.g. pens, pencils) into your mouth Use disposable gloves when handling wet specimens and do not cross-contaminate models or bones with wet specimens Always wash hands with liquid soap and dry thoroughly with disposable paper towel before leaving Low concentrations of chemicals used Chemicals used in well ventilated area Safety Data Sheets for chemicals available

Personal Protective Equipment required

 <div style="background-color: blue; color: white; padding: 2px 10px; display: inline-block;">Lab. Coat</div>	 <div style="background-color: blue; color: white; padding: 2px 10px; display: inline-block;">Closed in footwear</div>	 <div style="background-color: blue; color: white; padding: 2px 10px; display: inline-block;">Safety Glasses</div>	 <div style="background-color: blue; color: white; padding: 2px 10px; display: inline-block;">Gloves</div>
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Emergency Procedures

In the event of an alarm sounding, stop the practical class and wait for confirmation to evacuate from demonstrators. Then wash your hands and pack up your bags. Follow the instructions of the demonstrators regarding exits and assembly points.

- Clean up and waste disposal**
- Cover wet specimens with the towels provided. Make sure that towels do not hang over the edge of the table, because this allows fluid to drip onto the floor. Fluids on the floor are a major safety hazard and should be reported to staff immediately.
 - Replace stools under the tables in your cubicle.
 - Remove your gloves and dispose in the biowaste bins provided.
 - Wash your hands and instruments thoroughly with the soap and dry your hands with paper towel.
 - Remove your laboratory coat when you leave the dissecting room.

Ethics Approval

This type of practical has been previously considered and approved by the UNSW Human Research Ethics Advisory Panel (HC180115).

Declaration

I have read and understand the safety requirements for this practical class and I will observe these requirements.

Signature:..... **Date:**.....

Student number:

Ethical Behaviour and human remains

The learning in this course is centred around study of prosected (professionally dissected) human anatomical specimens which have been preserved and prepared from people who have donated their bodies to UNSW via a Bequeathal Program so that you and your peers can study the human body. This is an extraordinary, generous act of these donors and their families and is a special privilege. Treating these remains with the utmost care and respect is mandatory and our responsibility. It is good ethical practice and is mandated by law. The University operates the Bequeathal Program under the Code of Practice noted below, which all students are required to adhere to.

Before arriving for the first laboratory session in this course, students **MUST** complete the online modules listed as compulsory in Week 1 of the course Moodle site.

Code of Practice:

The University recognises the magnitude of the contribution made by those who donate their bodies for the teaching of anatomy and it is committed to treating the human remains entrusted to its care with the utmost respect and professionalism. In keeping with this commitment, the University requires its employees and students to uphold all legal, public health, and ethical standards associated with the handling of bodies and human tissue samples.

Any activity which undermines its ability to meet UNSW's legislative obligations, or which devalues the contribution made by those who donate their bodies for the purposes of the teaching of anatomy to students will be in breach of this policy and subject to further action

See medicalsciences.med.unsw.edu.au/students/undergraduate/advice-students#Practicals

Administrative help

Staff in SoMS student administration are available to help with problems with enrolment and scheduling and should be the first point of contact for administrative problems.

You can contact them online via the UNSW Student Portal Web forms <http://unsw.to/webforms>

Week	Tutorial (Monday 3-5 pm) Anat Lab 07/ TETB G16	Seminars (Wednesday 11am-1pm) Mat Th A	Labs (Thursday 9 am- 12 pm) Anat Lab 07	Online Activities
0 week	No compulsory activities; Students to familiarise themselves with course outline and structure; Week 1 videos available online.			
Week 1: 17 th /19 th /20 th Feb	Course overview; Discussion: Bones of the thoracic wall Joints; mechanics of respiration	S1. Recap- the intercostal space; Diaphragm S2. The mediastinum and its contents; The breast	Thoracic wall, Diaphragm; Contents of the mediastinum	Thoracic wall video lecture (3 parts) Breast video lec Diaphragm video lec
Week 2: 24 th /26 th /27 th Feb	Activity: The autonomic nervous system Clinical cases: Thoracic wall; breast	S3. The lower respiratory tract; Oesophagus S4. Lymphatic drainage of thorax	The lower respiratory tract; Closer look at mediastinal contents	
Week 3 2 nd /4 th /5 th Mar	Radiological Anatomy of the thorax Clinical cases: Respiratory tract, Oesophagus	S5-6. Pericardium and heart	Pericardium and heart	Nerves of the abdominal wall video lecture
Week 4 2 nd /4 th /5 th Mar	Clinical cases pericardium and heart Activity: Coronary vessels	S7. The abdominal wall and inguinal canal S8. The peritoneal cavity	The abdominal wall, inguinal canal The peritoneal cavity	
Week 5 9 th /11 th /12 th Mar	Activities: The blood supply of the gut (Coeliac trunk, SMA, IMA, Portal vein)	S9 and S10. The foregut and associated organs	The foregut	
Week 6 16 th /18 th /19 th Mar	Revision lab	S11. The small and large intestine S12. Aorta; IVC; ANS in the abdomen	The intestines and their blood supply; Vessels and nerves of the abdomen	
Week 7 23 rd /25 th /26 th Mar	Spot test 1	S13. The suprarenals, kidneys, ureters S14. The bony pelvis and pelvic walls S15. The urinary bladder and urethra	The suprarenal glands, kidneys and ureters; The bony pelvis; The urinary bladder and urethra	Suprarenals, kidneys, ureters; Intro to the pelvis; Urinary bladder & urethra
Week 8 30 th Mar/1 st /2 nd Apr	Assignment presentations/ Peer review- Clinical cases related to GIT	S16 and 17. The male and female reproductive system	The male and female reproductive systems	
Week 9 8 th /9 th Apr	Easter Monday Public Holiday	S18. The rectum and anal canal; The perineum; S19. The vessels and nerves of the pelvis and perineum	The rectum and anal canal; The perineum The vessels and nerves of the pelvis	
Week 10 13 th /15 th /16 th Apr	Cross-sectional and radiological anatomy of abdomen and pelvis Clinical cases pelvis/ perineum		Revision lab	Lymphatic drainage abdo and pelvis
Week 11 20 th April	Spot test 2	Final Exam will be scheduled in the Examination Period		

